



THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Perfluorocarbon (PFC) Analysis

Lot #: D9I120206

Dena Haverland

Dalton Utilities
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October 1, 2009

Case Narrative

D9I120206

TestAmerica Denver utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the methods summary page in accordance with the methods indicated. Dilution factors and footnotes are provided on each datasheet to assist in the interpretation of the results.

The results relate only to the samples in this report and meet all requirements of NELAC. All data have been reviewed for compliance with the laboratory QA/QC plan and have found to be compliant with laboratory protocols with any exceptions noted below.

Please note that Non-Detect (ND) results have been evaluated down to the Method Detection Limit (MDL) and should be considered ND at the MDL. Unless otherwise noted, results for solids have been dry weight corrected.

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Sample Arrival and Receipt

The following report contains the analytical results for thirteen samples received at TestAmerica Denver on September 12, 2009, according to documented sample acceptance procedures. The samples were received in good condition at a temperature of 0.8°C. No anomalies were encountered during sample receipt.

Standards

Analytical standards were prepared using commercially available certified solutions containing all compounds of interest.

The mass labeled compounds 13C4 PFBA, 13C2 PFHxA, 18O2 PFHxS, 13C4 PFOA, 13C4 PFOS, 13C5 PFNA, 13C2 PFDA, 13C2 PFUnA, 13C2 PFDoA, and D3 MeFOSA were introduced at the extraction step and were used for internal standards for the quantitation of the target compounds.

Sample Extraction and Analysis

The samples presented in this report were extracted for the target analytes by TestAmerica Denver's Standard Operating Procedure (SOP) DV-OP-0019 and analyzed for the target analytes by TestAmerica Denver's SOP DV-LC-0012.

Method QC Samples

The Method Blank is processed reagent water spiked with surrogate and prepared with each batch of 20 samples of the same matrix. The method blanks were non-detect at the reporting limits for the target analytes.

Each batch is prepared with low and mid level Laboratory Control Samples (LCS). The LCS recoveries for both levels were within established control limits, with the exception of the items noted in section Analytical Comments.

Analytical Comments

The Standard Operating Procedure (SOP) was altered slightly in the sample preparation for FOSA. Sodium hydroxide was added to all thirteen samples to obtain a pH of 14 instead of the SOP required <2. The basic pH is generating better internal standard recoveries for Me FOSA. Also, Strata-XL cartridges were used instead of the SOP required Strata-X. The Strata-XL

cartridge was used to minimize clogging during the extraction of these samples, as the larger pore size of the Strata-XL allows more viscous sample matrix to be extracted.

Due to low internal standard recoveries, samples #85 1111 Maplegrove RD, #86 421 Maplegrove RD, #89 5322 HWY 225, #90 5263 HWY 225, and Field BLK were re-extracted out of the laboratory prescribed hold time and reanalyzed in QC batch 9263043. Both batches are included in this report. Please note the sample results should be considered estimated.

Several samples exhibited internal standard recoveries outside the control limits (50-200%), as detailed below:

Sample	Original Internal Standard Recovery (9257503)	Re-analysis Internal Standard Recovery (9263043)
#85 1111 Maplegrove RD	13C2 PFUnA: 40% 13C2 PFDoA: 42%	13C2 PFUnA: 42% 13C2 PFDoA: 42%
#86 421 Maplegrove RD	13C2 PFUnA: 49%	13C2 PFUnA: 39% 13C2 PFDoA: 42%
#90 5263 HWY 225	13C4 PFOS: 44% 13C2 PFUnA: 39% 13C2 PFDoA: 41%	13C2 PFUnA: 45% 13C2 PFDoA: 43%
Field BLK	13C2 PFDoA: 44%	13C2 PFDoA: 53%

Upon re-extraction and reanalysis in batch 9263043, the internal standard recovery outliers did not confirm. Both the original and reanalysis data have been provided, as re-extraction was unavoidably performed outside the recommended sample holding times.

The internal standard recoveries for MeFOSA associated with QC batch 9260167 were recovered below the lower limit of 50% in samples #86 421 Maplegrove RD, #89 5322 HWY 225, #90 5263 HWY 225, and #91 5183 HWY 225. Upon re-extraction and reanalysis in QC batch 9266147, internal standard recovery outliers were still present in samples #86 421 Maplegrove RD and #91 5183 HWY 225, demonstrating this anomaly is most likely due to matrix interference. Upon re-extraction past hold time and reanalysis in QC batch 9266147, surrogate recoveries were 100% in control in samples #89 5322 HWY 225 and #90 5263 HWY 225. Both the original and reanalysis data have been provided for samples #89 5322 HWY 225 and #90 5263 HWY 225, as re-extraction was unavoidably performed outside the laboratory recommended sample holding time.

Due to a limitation in the LIMS system, the low-level LCS associated with QC batch 9257503 reported the percent recovery for Perfluorotetradecanoic Acid (PFTeA) as 0.0%. PFTeA was recovered within the control limits (50-150%) at 59%. As this compound was detected below the Method Detection Limit (MDL) of 0.020 ug/L, the system reports the percent recovery as 0.0%.

The mid-level LCS/LCSD analyses associated with QC batch 9263043 exhibited an internal standard recovery outside the QC control limits for 13C2 PFDoA. This is the re-extraction batch for batch 9257503. The method blank, low-level LCS, and mid-level LCSD internal standard recoveries were in control; therefore, corrective action is deemed unnecessary.

The mid-level LCS/LCSD analyses associated with QC batch 9266147 exhibited percent recoveries outside the QC control limits for Perfluorooctane sulfonamide (FOSA). This is an

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indicator data may be biased high. As no detectable concentrations are present in the associated samples, corrective action is deemed unnecessary.

The method required MS/MSD could not be performed for QC batches 9257503, 9260167, 9263043, and 9266147, due to insufficient sample volume. Method precision and accuracy have been verified by the acceptable low-level LCS and mid-level LCS/LCSD analyses data.

No other anomalies were observed.

EXECUTIVE SUMMARY - Detection Highlights

D9II120206

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
#89 5322 HWY 225 09/11/09 14:43 008				
Perfluoroctanesulfonate	0.024	0.020	ug/L	DEN -LC-0012
#90 5263 HWY 225 09/11/09 15:13 009				
Perfluoroctanoic Acid	0.10	0.020	ug/L	DEN -LC-0012
Perfluoroctanesulfonate	0.018 J	0.020	ug/L	DEN -LC-0012
Perfluorobutanoic acid (PFBA)	0.040	0.020	ug/L	DEN -LC-0012
Perfluoropentanoic acid (PFPA)	0.080	0.030	ug/L	DEN -LC-0012
Perfluorohexanoic acid (PFHxA)	0.060	0.020	ug/L	DEN -LC-0012
Perfluoroheptanoic acid (PFHpA)	0.042	0.020	ug/L	DEN -LC-0012
Perfluorodecanoic acid (PFDA)	0.023	0.020	ug/L	DEN -LC-0012
Perfluorobutane sulfonate (PFB)	0.019 J	0.020	ug/L	DEN -LC-0012
Perfluoroctanoic Acid	0.092	0.020	ug/L	DEN -LC-0012
Perfluoroctanesulfonate	0.016 J	0.020	ug/L	DEN -LC-0012
Perfluorobutanoic acid (PFBA)	0.041	0.020	ug/L	DEN -LC-0012
Perfluoropentanoic acid (PFPA)	0.070	0.030	ug/L	DEN -LC-0012
Perfluorohexanoic acid (PFHxA)	0.058	0.020	ug/L	DEN -LC-0012
Perfluoroheptanoic acid (PFHpA)	0.043	0.020	ug/L	DEN -LC-0012
Perfluorodecanoic acid (PFDA)	0.021	0.020	ug/L	DEN -LC-0012
Perfluorobutane sulfonate (PFB)	0.016 J	0.020	ug/L	DEN -LC-0012

METHODS SUMMARY

D9II120206

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
LC/MS/MS PFCs	DEN -LC-0012	SW846 FOSA spec

References:

DEN Severn Trent Laboratores, Denver, Facility Standard
Operating Procedure.

METHOD / ANALYST SUMMARY

D9II120206

<u>ANALYTICAL METHOD</u>	<u>ANALYST</u>	<u>ANALYST ID</u>
DEN -LC-0012	Jacqueline Bonnett	003601

References:

DEN Severn Trent Laboratores, Denver, Facility Standard
Operating Procedure.

SAMPLE SUMMARY

D9I120206

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LKP57	001	#82 333 FOX BRIDGE RD	09/11/09	10:20
LKP6A	002	#83 345 FOX BRIDGE RD	09/11/09	10:33
LKP6C	003	#84 1535 FOX BRIDGE RD	09/11/09	11:20
LKP6F	004	#85 1111 MAPLEGROVE CHURCH RD	09/11/09	13:28
LKP6J	005	#86 421 MAPLEGROVE CHURCH RD	09/11/09	13:55
LKP6K	006	#87 5412 HWY 225	09/11/09	14:11
LKP6M	007	#88 5315 HWY 225	09/11/09	14:26
LKP6N	008	#89 5322 HWY 225	09/11/09	14:43
LKP6Q	009	#90 5263 HWY 225	09/11/09	15:13
LKP6T	010	#91 5183 HWY 225	09/11/09	15:25
LKP6V	011	TRIP BLK	09/11/09	
LKP6X	012	FIELD BLK	09/11/09	
LKP6O	013	DUP	09/11/09	

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Dalton Utilities

Client Sample ID: #82 333 FOX BRIDGE RD

HPLC

Lot-Sample #....: D9I120206-001 Work Order #....: LKP571AA Matrix.....: WATER
 Date Sampled....: 09/11/09 10:20 Date Received...: 09/12/09
 Prep Date.....: 09/14/09 Analysis Date...: 09/16/09
 Prep Batch #....: 9257503 Analysis Time...: 22:05
 Dilution Factor: 1

Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUn A)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDo A)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFT riA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (P FTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFB S)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFH xS)	ND	0.030	ug/L	0.0070

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
13C4 PFOA	109	(50 - 200)
13C4 PFOS	63	(50 - 200)
13C4 PFBA	76	(50 - 200)
13C2 PFHxA	89	(50 - 200)
18O2 PFHxS	107	(50 - 200)
13C5 PFNA	86	(50 - 200)
13C2 PFDA	62	(50 - 200)
13C2 PFUnA	52	(50 - 200)
13C2 PFDoA	65	(50 - 200)

Dalton Utilities

Client Sample ID: #82 333 FOX BRIDGE RD

HPLC

Lot-Sample #....: D9I120206-001 Work Order #....: LKP571AC Matrix.....: WATER
Date Sampled....: 09/11/09 10:20 Date Received...: 09/12/09
Prep Date.....: 09/17/09 Analysis Date...: 09/19/09
Prep Batch #....: 9260167 Analysis Time...: 03:52
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057
SURROGATE	PERCENT	RECOVERY		
MeFOSA	RECOVERY	LIMITS		
	63	(50 - 200)		

Dalton Utilities

Client Sample ID: #83 345 FOX BRIDGE RD

HPLC

Lot-Sample #....: D9I120206-002 Work Order #....: LKP6A1AA Matrix.....: WATER
 Date Sampled...: 09/11/09 10:33 Date Received...: 09/12/09
 Prep Date.....: 09/14/09 Analysis Date...: 09/16/09
 Prep Batch #....: 9257503 Analysis Time...: 22:21
 Dilution Factor: 1 Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluoroctanoic Acid	ND	0.020	ug/L	0.0098
Perfluoroctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
)				
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUnA)	ND	0.020	ug/L	0.0069
A)				
Perfluorododecanoic acid (PFDoA)	ND	0.020	ug/L	0.015
A)				
Perfluorotridecanoic acid (PFTriA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (PFTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFBS)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFHxS)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	
13C4 PFOA	103	(50	- 200)
13C4 PFOS	59	(50	- 200)
13C4 PFBA	74	(50	- 200)
13C2 PFHxS	87	(50	- 200)
18O2 PFHxS	101	(50	- 200)
13C5 PFNA	83	(50	- 200)
13C2 PFDA	66	(50	- 200)
13C2 PFUnA	52	(50	- 200)
13C2 PFDoA	56	(50	- 200)

Dalton Utilities

Client Sample ID: #83 345 FOX BRIDGE RD

HPLC

Lot-Sample #....: D9I120206-002 Work Order #....: LKP6A1AC Matrix.....: WATER
Date Sampled...: 09/11/09 10:33 Date Received...: 09/12/09
Prep Date.....: 09/17/09 Analysis Date...: 09/19/09
Prep Batch #....: 9260167 Analysis Time..: 04:00
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F-OSA)	ND	0.050	ug/L	0.0057
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
MeFOSA	64	(50 - 200)		

Dalton Utilities

Client Sample ID: #84 1535 FOX BRIDGE RD

HPLC

Lot-Sample #....: D9II120206-003 Work Order #....: LKP6C1AA Matrix.....: WATER
 Date Sampled....: 09/11/09 11:20 Date Received..: 09/12/09
 Prep Date.....: 09/14/09 Analysis Date...: 09/16/09
 Prep Batch #....: 9257503 Analysis Time..: 22:37
 Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUn A)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDo A)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFT riA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (P FTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFB S)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFH xS)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	
13C4 PFOA	111	(50	- 200)
13C4 PFOS	67	(50	- 200)
13C4 PFBA	79	(50	- 200)
13C2 PFHxA	92	(50	- 200)
18O2 PFHxS	109	(50	- 200)
13C5 PFNA	99	(50	- 200)
13C2 PFDA	76	(50	- 200)
13C2 PFUnA	59	(50	- 200)
13C2 PFDoA	63	(50	- 200)

Dalton Utilities

Client Sample ID: #84 1535 FOX BRIDGE RD

HPLC

Lot-Sample #....: D9I120206-003 Work Order #....: LKP6C1AC Matrix.....: WATER
Date Sampled....: 09/11/09 11:20 Date Received...: 09/12/09
Prep Date.....: 09/17/09 Analysis Date...: 09/19/09
Prep Batch #....: 9260167 Analysis Time...: 04:07
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057
<hr/>				
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
MeFOSA	55	(50 - 200)		

Dalton Utilities

Client Sample ID: #85 1111 MAPLEGROVE CHURCH RD

HPLC

Lot-Sample #....: D9I120206-004 Work Order #....: LKP6F1AA Matrix.....: WATER
 Date Sampled....: 09/11/09 13:28 Date Received...: 09/12/09
 Prep Date.....: 09/14/09 Analysis Date...: 09/16/09
 Prep Batch #....: 9257503 Analysis Time...: 22:53
 Dilution Factor: 1

Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUn A)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDo A)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFT riA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (PFTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFBS)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFH xS)	ND	0.030	ug/L	0.0070

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
13C4 PFOA	102	(50 - 200)
13C4 PFOS	55	(50 - 200)
13C4 PFBA	79	(50 - 200)
13C2 PFHxA	90	(50 - 200)
18O2 PFHxS	107	(50 - 200)
13C5 PFNA	86	(50 - 200)
13C2 PFDA	59	(50 - 200)
13C2 PFUnA	40 *	(50 - 200)
13C2 PFDoA	42 *	(50 - 200)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: #85 1111 MAPLEGROVE CHURCH RD

HPLC

Lot-Sample #....: D9I120206-004 Work Order #....: LKP6F1AC Matrix.....: WATER
Date Sampled....: 09/11/09 13:28 Date Received...: 09/12/09
Prep Date.....: 09/17/09 Analysis Date...: 09/19/09
Prep Batch #....: 9260167 Analysis Time...: 04:14
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057
SURROGATE		PERCENT	RECOVERY	
MeFOSA		RECOVERY	LIMITS	
	57	(50 - 200)		

Dalton Utilities

Client Sample ID: #85 1111 MAPLEGROVE CHURCH RD

HPLC

Lot-Sample #....: D9I120206-004 Work Order #....: LKP6F2AA Matrix.....: WATER
 Date Sampled...: 09/11/09 13:28 Date Received...: 09/12/09
 Prep Date.....: 09/20/09 Analysis Date...: 09/25/09
 Prep Batch #....: 9263043 Analysis Time...: 08:01
 Dilution Factor: 1 Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUn A)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDo A)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFT riA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (P FTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFB S)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFH xS)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C4 PFOA	107	(50 - 200)
13C4 PFOS	66	(50 - 200)
13C4 PFBA	54	(50 - 200)
13C2 PFHxA	90	(50 - 200)
18O2 PFHxS	96	(50 - 200)
13C5 PFNA	73	(50 - 200)
13C2 PFDA	56	(50 - 200)
13C2 PFUnA	42 *	(50 - 200)
13C2 PFDoA	42 *	(50 - 200)

NOTE(S) :

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: #86 421 MAPLEGROVE CHURCH RD

HPLC

Lot-Sample #....: D9I120206-005 Work Order #....: LKP6J1AA Matrix.....: WATER
 Date Sampled...: 09/11/09 13:55 Date Received...: 09/12/09
 Prep Date.....: 09/14/09 Analysis Date...: 09/16/09
 Prep Batch #....: 9257503 Analysis Time...: 23:09
 Dilution Factor: 1 Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUn A)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDo A)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFT riA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (P FTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFB S)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFH xS)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	
13C4 PFOA	103	(50	- 200)
13C4 PFOS	56	(50	- 200)
13C4 PFBA	78	(50	- 200)
13C2 PFHxA	86	(50	- 200)
18O2 PFHxS	96	(50	- 200)
13C5 PFNA	82	(50	- 200)
13C2 PFDA	63	(50	- 200)
13C2 PFUnA	49 *	(50	- 200)
13C2 PFDoA	50	(50	- 200)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: #86 421 MAPLEGROVE CHURCH RD

HPLC

Lot-Sample #....: D9II120206-005 Work Order #....: LKP6J1AC Matrix.....: WATER
Date Sampled....: 09/11/09 13:55 Date Received...: 09/12/09
Prep Date.....: 09/17/09 Analysis Date...: 09/19/09
Prep Batch #....: 9260167 Analysis Time...: 04:21
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057
SURROGATE	PERCENT	RECOVERY		
MeFOSA	RECOVERY	LIMITS		
	46 *	(50 - 200)		

NOTE(S) :

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: #86 421 MAPLEGROVE CHURCH RD

HPLC

Lot-Sample #....: D9I120206-005 Work Order #....: LKP6J2AA Matrix.....: WATER
 Date Sampled...: 09/11/09 13:55 Date Received...: 09/12/09
 Prep Date.....: 09/20/09 Analysis Date...: 09/25/09
 Prep Batch #....: 9263043 Analysis Time...: 08:17
 Dilution Factor: 1 Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
)				
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUnA)	ND	0.020	ug/L	0.0069
A)				
Perfluorododecanoic acid (PFDoA)	ND	0.020	ug/L	0.015
A)				
Perfluorotridecanoic acid (PFTriA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (PFTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFBs)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFHxs)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	
13C4 PFOA	112	(50	- 200)
13C4 PFOS	66	(50	- 200)
13C4 PFBA	52	(50	- 200)
13C2 PFHxA	94	(50	- 200)
18O2 PFHxs	100	(50	- 200)
13C5 PFNA	77	(50	- 200)
13C2 PFDA	56	(50	- 200)
13C2 PFUnA	39 *	(50	- 200)
13C2 PFDoA	42 *	(50	- 200)

NOTE(S) :

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: #87 5412 HWY 225

HPLC

Lot-Sample #....: D9II120206-006 Work Order #....: LKP6K1AA Matrix.....: WATER
 Date Sampled....: 09/11/09 14:11 Date Received...: 09/12/09
 Prep Date.....: 09/14/09 Analysis Date...: 09/16/09
 Prep Batch #....: 9257503 Analysis Time...: 23:41
 Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluoroctanoic Acid	ND	0.020	ug/L	0.0098
Perfluoroctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUn A)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDo A)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFT riA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (P FTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFB S)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFH xS)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	
13C4 PFOA	104	(50	- 200)
13C4 PFOS	62	(50	- 200)
13C4 PFBA	79	(50	- 200)
13C2 PFHxA	88	(50	- 200)
18O2 PFHxS	106	(50	- 200)
13C5 PFNA	91	(50	- 200)
13C2 PFDA	72	(50	- 200)
13C2 PFUnA	58	(50	- 200)
13C2 PFDoA	57	(50	- 200)

Dalton Utilities

Client Sample ID: #87 5412 HWY 225

HPLC

Lot-Sample #....: D9II120206-006 Work Order #....: LKP6K1AC Matrix.....: WATER
 Date Sampled...: 09/11/09 14:11 Date Received...: 09/12/09
 Prep Date.....: 09/17/09 Analysis Date...: 09/19/09
 Prep Batch #....: 9260167 Analysis Time...: 04:35
 Dilution Factor: 1

Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057
<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>		
MeFOSA	RECOVERY	<u>LIMITS</u>		
	53	(50 - 200)		

Dalton Utilities

Client Sample ID: #88 5315 HWY 225

HPLC

Lot-Sample #....: D9I120206-007 Work Order #....: LKP6M1AA Matrix.....: WATER
 Date Sampled....: 09/11/09 14:26 Date Received...: 09/12/09
 Prep Date.....: 09/14/09 Analysis Date...: 09/16/09
 Prep Batch #....: 9257503 Analysis Time...: 23:58
 Dilution Factor: 1 Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUn A)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDo A)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFT riA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (P FTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFB S)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFH xS)	ND	0.030	ug/L	0.0070

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
13C4 PFOA	105	(50 - 200)
13C4 PFOS	64	(50 - 200)
13C4 PFBA	79	(50 - 200)
13C2 PFHxA	92	(50 - 200)
18O2 PFHxS	108	(50 - 200)
13C5 PFNA	89	(50 - 200)
13C2 PFDA	74	(50 - 200)
13C2 PFUnA	61	(50 - 200)
13C2 PFDoA	65	(50 - 200)

Dalton Utilities

Client Sample ID: #88 5315 HWY 225

HPLC

Lot-Sample #....: D9I120206-007 Work Order #....: LKP6M1AC Matrix.....: WATER
Date Sampled....: 09/11/09 14:26 Date Received...: 09/12/09
Prep Date.....: 09/17/09 Analysis Date...: 09/19/09
Prep Batch #....: 9260167 Analysis Time...: 04:43
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
MeFOSA	53	(50 - 200)		

Dalton Utilities

Client Sample ID: #89 5322 HWY 225

HPLC

Lot-Sample #....: D9I120206-008 Work Order #....: LKP6N1AA Matrix.....: WATER
 Date Sampled....: 09/11/09 14:43 Date Received...: 09/12/09
 Prep Date.....: 09/14/09 Analysis Date...: 09/17/09
 Prep Batch #....: 9257503 Analysis Time...: 00:14
 Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	0.024	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluorooctanoic acid (PFHpA)	ND	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUn A)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDo A)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFT riA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (P FTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFB S)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFH xS)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	
13C4 PFOA	95	(50	- 200)
13C4 PFOS	61	(50	- 200)
13C4 PFBA	69	(50	- 200)
13C2 PFHxA	78	(50	- 200)
18O2 PFHxS	85	(50	- 200)
13C5 PFNA	83	(50	- 200)
13C2 PFDA	71	(50	- 200)
13C2 PFUnA	55	(50	- 200)
13C2 PFDoA	54	(50	- 200)

Dalton Utilities

Client Sample ID: #89 5322 HWY 225

HPLC

Lot-Sample #....: D9I120206-008 Work Order #....: LKP6N1AC Matrix.....: WATER
Date Sampled...: 09/11/09 14:43 Date Received...: 09/12/09
Prep Date.....: 09/17/09 Analysis Date...: 09/19/09
Prep Batch #....: 9260167 Analysis Time..: 04:50
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
MeFOSA	43 *	(50 - 200)		

NOTE(S) :

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: #89 5322 HWY 225

HPLC

Lot-Sample #....: D9II120206-008 Work Order #....: LKP6N2AC Matrix.....: WATER
Date Sampled...: 09/11/09 14:43 Date Received...: 09/12/09
Prep Date.....: 09/23/09 Analysis Date...: 09/25/09
Prep Batch #....: 9266147 Analysis Time...: 19:02
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057
SURROGATE	PERCENT	RECOVERY		
MePOSA	RECOVERY	LIMITS		
	56	(50 - 200)		

Dalton Utilities

Client Sample ID: #90 5263 HWY 225

HPLC

Lot-Sample #....: D9I120206-009 Work Order #....: LKP6Q1AA
 Date Sampled...: 09/11/09 15:13 Date Received...: 09/12/09
 Prep Date.....: 09/14/09 Analysis Date...: 09/17/09
 Prep Batch #....: 9257503 Analysis Time...: 00:30
 Dilution Factor: 1

Matrix.....: WATER

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctanoic Acid	0.10	0.020	ug/L	0.0098
Perfluorooctanesulfonate	0.018 J	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	0.040	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	0.080	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	0.060	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	0.042	0.020	ug/L	0.013
)				
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	0.023	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUnA)	ND	0.020	ug/L	0.0069
A)				
Perfluorododecanoic acid (PFDoA)	ND	0.020	ug/L	0.015
A)				
Perfluorotridecanoic acid (PFTriA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (PFTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFB)	0.019 J	0.020	ug/L	0.0082
S)				
Perfluorohexane sulfonate (PFHxS)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	
13C4 PFOA	84	(50	- 200)
13C4 PFOS	44 *	(50	- 200)
13C4 PFBA	69	(50	- 200)
13C2 PFHxA	78	(50	- 200)
18O2 PFHxS	84	(50	- 200)
13C5 PFNA	70	(50	- 200)
13C2 PFDA	50	(50	- 200)
13C2 PFUnA	39 *	(50	- 200)
13C2 PFDoA	41 *	(50	- 200)

NOTE(S) :

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: #90 5263 HWY 225

HPLC

Lot-Sample #....: D9I120206-009 Work Order #....: LKP6Q1AC Matrix.....: WATER
Date Sampled....: 09/11/09 15:13 Date Received...: 09/12/09
Prep Date.....: 09/17/09 Analysis Date...: 09/19/09
Prep Batch #....: 9260167 Analysis Time...: 04:57
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
MeFOSA	47 *	(50 - 200)		

NOTE(S) :

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: #90 5263 HWY 225

HPLC

Lot-Sample #....: D9II120206-009 Work Order #....: LKP6Q2AA Matrix.....: WATER
 Date Sampled....: 09/11/09 15:13 Date Received...: 09/12/09
 Prep Date.....: 09/20/09 Analysis Date...: 09/25/09
 Prep Batch #....: 9263043 Analysis Time...: 08:34
 Dilution Factor: 1 Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorooctanoic Acid	0.092	0.020	ug/L	0.0098
Perfluorooctanesulfonate	0.016 J	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	0.041	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	0.070	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	0.058	0.020	ug/L	0.0029
Perfluorooctanoic acid (PFHpA)	0.043	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	0.021	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUn A)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDo A)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFT riA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (P FTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFB S)	0.016 J	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFH xS)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C4 PFOA	110	(50 - 200)
13C4 PFOS	70	(50 - 200)
13C4 PFBA	60	(50 - 200)
13C2 PFHxA	97	(50 - 200)
18O2 PFHxS	102	(50 - 200)
13C5 PFNA	77	(50 - 200)
13C2 PFDA	62	(50 - 200)
13C2 PFUnA	45 *	(50 - 200)
13C2 PFDoA	43 *	(50 - 200)

NOTE (S) :

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: #90 5263 HWY 225

HPLC

Lot-Sample #....: D9II120206-009 Work Order #....: LKP6Q2AC Matrix.....: WATER
Date Sampled...: 09/11/09 15:13 Date Received...: 09/12/09
Prep Date.....: 09/23/09 Analysis Date...: 09/25/09
Prep Batch #....: 9266147 Analysis Time...: 19:09
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057
SURROGATE	PERCENT	RECOVERY	LIMITS	
MeFOSA	51	(50 - 200)		

Dalton Utilities

Client Sample ID: #91 5183 HWY 225

HPLC

Lot-Sample #....: D9I120206-010 Work Order #....: LKP6T1AA Matrix.....: WATER
 Date Sampled....: 09/11/09 15:25 Date Received...: 09/12/09
 Prep Date.....: 09/14/09 Analysis Date...: 09/17/09
 Prep Batch #....: 9257503 Analysis Time...: 00:46
 Dilution Factor: 1 Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUn A)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDo A)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFT riA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (P FTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFB S)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFH xS)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C4 PFOA	93	(50 - 200)
13C4 PFOS	55	(50 - 200)
13C4 PFBA	74	(50 - 200)
13C2 PFHxA	79	(50 - 200)
18O2 PFHxS	90	(50 - 200)
13C5 PFNA	78	(50 - 200)
13C2 PFDA	64	(50 - 200)
13C2 PFUnA	51	(50 - 200)
13C2 PFDoA	55	(50 - 200)

Dalton Utilities

Client Sample ID: #91 5183 HWY 225

HPLC

Lot-Sample #: D9I120206-010 Work Order #: LKP6T1AC Matrix.....: WATER
Date Sampled...: 09/11/09 15:25 Date Received...: 09/12/09
Prep Date.....: 09/17/09 Analysis Date...: 09/19/09
Prep Batch #: 9260167 Analysis Time...: 05:04
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057
SURROGATE		RECOVERY		
MeFOSA		PERCENT	RECOVERY	LIMITS
		47 *	(50 - 200)	

NOTE(S) :

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: TRIP BLK

HPLC

Lot-Sample #....: D9I120206-011 Work Order #....: LKP6V1AA Matrix.....: WATER
 Date Sampled....: 09/11/09 Date Received...: 09/12/09
 Prep Date.....: 09/14/09 Analysis Date...: 09/17/09
 Prep Batch #....: 9257503 Analysis Time...: 01:02
 Dilution Factor: 1

Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluoroctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUn A)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDo A)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFT riA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (PFTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFB S)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFH xS)	ND	0.030	ug/L	0.0070

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
13C4 PFOA	113	(50 - 200)
13C4 PFOS	85	(50 - 200)
13C4 PFBA	80	(50 - 200)
13C2 PFHxA	93	(50 - 200)
18O2 PFHxS	105	(50 - 200)
13C5 PFNA	116	(50 - 200)
13C2 PFDA	96	(50 - 200)
13C2 PFUnA	67	(50 - 200)
13C2 PFDoA	61	(50 - 200)

Dalton Utilities

Client Sample ID: TRIP BLK

HPLC

Lot-Sample #....: D9I120206-011 Work Order #....: LKP6V1AC Matrix.....: WATER
Date Sampled...: 09/11/09 Date Received...: 09/12/09
Prep Date.....: 09/17/09 Analysis Date...: 09/19/09
Prep Batch #....: 9260167 Analysis Time...: 05:11
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluoroctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
MeFOSA	63	(50 - 200)		

Dalton Utilities

Client Sample ID: FIELD BLK

HPLC

Lot-Sample #....: D9I120206-012 Work Order #....: LKP6X1AA Matrix.....: WATER
 Date Sampled....: 09/11/09 Date Received...: 09/12/09
 Prep Date.....: 09/14/09 Analysis Date...: 09/17/09
 Prep Batch #....: 9257503 Analysis Time...: 01:18
 Dilution Factor: 1
 Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluorooctanoic acid (PFHpA)	ND	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUn A)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDo A)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFT riA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (P FTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFB S)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFH xS)	ND	0.030	ug/L	0.0070

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
13C4 PFOA	110	(50 - 200)
13C4 PFOS	77	(50 - 200)
13C4 PFBA	81	(50 - 200)
13C2 PFHxA	88	(50 - 200)
18O2 PFHxS	98	(50 - 200)
13C5 PFNA	108	(50 - 200)
13C2 PFDA	89	(50 - 200)
13C2 PFUnA	55	(50 - 200)
13C2 PFDoA	44 *	(50 - 200)

NOTE(S) :

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: FIELD BLK

HPLC

Lot-Sample #....: D9II120206-012 Work Order #....: LKP6X1AC Matrix.....: WATER
Date Sampled...: 09/11/09 Date Received...: 09/12/09
Prep Date.....: 09/17/09 Analysis Date...: 09/19/09
Prep Batch #....: 9260167 Analysis Time...: 05:18
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057
SURROGATE	PERCENT	RECOVERY		
MeFOSA	RECOVERY	LIMITS		
	67	(50 - 200)		

Dalton Utilities

Client Sample ID: FIELD BLK

HPLC

Lot-Sample #....: D9I120206-012 Work Order #....: LKP6X2AA Matrix.....: WATER
 Date Sampled....: 09/11/09 Date Received...: 09/12/09
 Prep Date.....: 09/20/09 Analysis Date...: 09/25/09
 Prep Batch #....: 9263043 Analysis Time..: 08:50
 Dilution Factor: 1
 Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
)				
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUn A)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDo A)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFT riA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (P FTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFB S)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFH xS)	ND	0.030	ug/L	0.0070

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
13C4 PFOA	95	(50 - 200)
13C4 PFOS	79	(50 - 200)
13C4 PFBA	54	(50 - 200)
13C2 PFHxA	78	(50 - 200)
18O2 PFHxS	80	(50 - 200)
13C5 PFNA	77	(50 - 200)
13C2 PFDA	74	(50 - 200)
13C2 PFUnA	59	(50 - 200)
13C2 PFDoA	53	(50 - 200)

Dalton Utilities

Client Sample ID: DUP

HPLC

Lot-Sample #....: D9I120206-013 Work Order #....: LKP601AA Matrix.....: WATER
 Date Sampled....: 09/11/09 Date Received...: 09/12/09
 Prep Date.....: 09/14/09 Analysis Date...: 09/17/09
 Prep Batch #....: 9257503 Analysis Time...: 01:34
 Dilution Factor: 1
 Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUn A)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDo A)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFT riA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (P FTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFB S)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFH xS)	ND	0.030	ug/L	0.0070

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
13C4 PFOA	112	(50 - 200)
13C4 PFOS	69	(50 - 200)
13C4 PFBA	84	(50 - 200)
13C2 PFHxA	98	(50 - 200)
18O2 PFHxS	97	(50 - 200)
13C5 PFNA	100	(50 - 200)
13C2 PFDA	82	(50 - 200)
13C2 PFUnA	56	(50 - 200)
13C2 PFDoA	62	(50 - 200)

Dalton Utilities

Client Sample ID: DUP

HPLC

Lot-Sample #....: D9I120206-013 Work Order #....: LKP601AC Matrix.....: WATER
Date Sampled...: 09/11/09 Date Received..: 09/12/09
Prep Date.....: 09/17/09 Analysis Date..: 09/19/09
Prep Batch #....: 9260167 Analysis Time..: 05:26
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057
SURROGATE	PERCENT	RECOVERY	LIMITS	
MeFOSA	61		(50 - 200)	